

CLAIMS

What is claimed is:

1. A filter assembly comprising:
a self-supporting filter media configured to filter non-gaseous items
5 from a gas flow; and
a plurality of attachment strips, each strip having a first portion
attachable to the filter media and a second portion attachable to a housing surrounding
an intake.
- 10 2. The filter assembly of claim 1, wherein the filter media is washable.
3. The filter assembly of claim 1, wherein the filter media is semi-rigid.
4. The filter assembly of claim 1, wherein the filter is UV protected.
- 15 5. The filter assembly of claim 1, wherein the filter is permanently
electrostaticly charged to facilitate the pickup of dust and other airborne contaminants.
6. The filter assembly of claim 1, wherein the filter media is a three-
20 dimensional type filter.
7. The filter assembly of claim 6, wherein the three-dimensional type
filter is made from a synthetic polymer fiber.
- 25 8. The filter assembly of claim 6, wherein the three-dimensional type
filter includes a corrugated layer and a base layer that is interwoven with the
corrugated layer.
- 30 9. The filter assembly of claim 8, wherein the filter includes a top layer
that is interwoven with the corrugated layer such that the corrugated layer is between
the base layer and the top layer.

10. The filter assembly of claim 1, wherein the filter assembly is deformable to match the contour of the housing around the intake.

5 11. The filter assembly of claim 1, wherein the attachment strips surround the perimeter of the filter media.

12. The filter assembly of claim 1, wherein the first portion includes a first adhesive side, the first adhesive side being attachable to the filter media.

10 13. The filter assembly of claim 12, wherein the second portion includes a first adhesive side attachable to the housing.

15 14. The filter assembly of claim 13, wherein the first portion includes a second side and the second portion includes a second side, wherein the second sides of the first and second portions are removably attachable to each other by hook and loop fasteners.

15. A filter assembly comprising
a filter media;
a deformable frame positioned around at least a portion of the filter
media; and

5 attachment strips having first sides and second sides, the first sides
being attached to the deformable frame and the second sides being removably
attachable to a housing surrounding an inlet.

10 16. The filter assembly of claim 15, further comprising a support structure,
wherein the frame is at least positioned around at least a portion of the support
structure.

15 17. The filter assembly of claim 16, wherein the filter media and the
support structure are adjacent to each other within the frame.

18. The filter assembly of claim 17, wherein the frame completely
surrounds the perimeter of the filter media and the support structure.

20 19. The filter assembly of claim 16, wherein the support structure is a
metal screen.

20. The filter assembly of claim 19, wherein the metal screen is an
expanded media designed to allow air flow.

25 21. The filter assembly of claim 15, wherein the frame includes thin walled
C-shaped metal channels.

30 22. The filter assembly of claim 15, wherein the frame is substantially
rigid.

23. The filter assembly of claim 15, wherein the frame is made of a
flexible polymer.

24. The filter assembly of claim 15, wherein the attachment strips are magnetic strips.

5 25. The filter assembly of claim 24, wherein the magnetic strips are flexible.

26. The filter assembly of claim 24, wherein the magnetic strips are attached to the frame by adhesive.

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27. The filter assembly of claim 15, wherein the filter media is a three-dimensional type filter.

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28. The filter assembly of claim 27, wherein the three-dimensional type filter is permanently electrostatically charged to facilitate the pickup of dust and other airborne contaminants.

29. A method of mounting a filter to an intake on a housing, the method comprising:

selecting a filter media;

forming the filter media to a desired size to match the size and

5 contours of the intake;

fitting attachment strips along the periphery of the filter media; and

securing the filter media to an intake with the attachment strips.

30. A method as claimed in claim 29, wherein forming the media filter
10 includes cutting the media filter.

31. A method as claimed in claim 29, further comprising positioning a
deformable frame around the periphery of the media filter.

32. A method as claimed in claim 31, wherein forming the media filter
15 includes deforming the media filter and deformable frame.